



POWERING THE AGILE GRID™

April 7, 2015

Ed Whitfield
Chairman
Subcommittee on Energy and Power
Committee on Energy and Commerce
Congress of the United States
House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515-6115

Dear Mr. Whitfield,

Pursuant to your letter dated March 27, 2015 regarding additional questions following the Wednesday, March 4th, 2015 testimony at the hearing entitled, "The 21st Century Electricity Challenge: Ensuring a Secure, Reliable, and Modern Electricity System;"

1. Name of the Member whose question I am addressing: The Honorable H. Morgan Griffith
2. Question: **Mr. Patel – in your opening statement, you said, "Customer adoption of electric vehicles is creating new demand for power, each vehicle equivalent to an entire home while charging, requiring new utility demand control measures to avert overloading of existing infrastructure." Please provide the study or data which you are using as a basis for your statement that electric vehicles are creating new demand for power equivalent to an entire home.**
3. Answer: Various sources of data are available to support my statement that electric vehicles are creating new demand for power, equivalent to an entire home. One such source is a December 2014 ARRA report produced by the U.S. Department of Energy titled: "Evaluating Electric Vehicle Charging Impacts and Customer Charging Behaviors: Experiences from Six Smart Grid Investment Grant Projects" (<http://energy.gov/sites/prod/files/2014/12/f19/SGIG-EvaluatingEVcharging-Dec2014.pdf>). On page iv of the report, in the Grid Impacts section of Table 1. Summary of Key Project Experiences, it is noted that "The average power demand to charge most vehicles was 3 -6 kilowatts, which is roughly equivalent to powering a small, residential air conditioning unit." It is also noted in the same section that "...depending on the model, the load from one electric vehicle model can be as much as 19 kilowatts, which is more than the load for most large, single-family homes."

Please let me know if I can provide any additional information.

Kind regards,


Naimish Patel
CEO, Gridco Systems

Cc: Nick Abraham, Legislative Clerk, Committee on Energy and Commerce